

# SEQUENCE LISTING

<110> Sheen, Jen

<120> Calcium Dependent Protein Kinase  
Polypeptides as Regulators of Plant Disease Resistance

<130> 00786/389002

<150> US 60/201,925

<151> 2000-05-05

<160> 4

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 495

<212> PRT

<213> Arabidopsis thaliana

<400> 1

Met	Glu	Thr	Lys	Pro	Asn	Pro	Arg	Arg	Pro	Ser	Asn	Thr	Val	Leu	Pro
1				5					10					15	
Tyr	Gln	Thr	Pro	Arg	Leu	Arg	Asp	His	Tyr	Leu	Leu	Gly	Lys	Lys	Leu
			20					25					30		
Gly	Gln	Gly	Gln	Phe	Gly	Thr	Thr	Tyr	Leu	Cys	Thr	Glu	Lys	Ser	Thr
		35					40					45			
Ser	Ala	Asn	Tyr	Ala	Cys	Lys	Ser	Ile	Pro	Lys	Arg	Lys	Leu	Val	Cys
50						55					60				
Arg	Glu	Asp	Tyr	Glu	Asp	Val	Trp	Arg	Glu	Ile	Gln	Ile	Met	His	His
65					70					75					80
Leu	Ser	Glu	His	Pro	Asn	Val	Val	Arg	Ile	Lys	Gly	Thr	Tyr	Glu	Asp
				85					90					95	
Ser	Val	Phe	Val	His	Ile	Val	Met	Glu	Val	Cys	Glu	Gly	Gly	Glu	Leu
			100					105					110		
Phe	Asp	Arg	Ile	Val	Ser	Lys	Gly	His	Phe	Ser	Glu	Arg	Glu	Ala	Val
		115					120					125			
Lys	Leu	Ile	Lys	Thr	Ile	Leu	Gly	Val	Val	Glu	Ala	Cys	His	Ser	Leu
	130					135						140			
Gly	Val	Met	His	Arg	Asp	Leu	Lys	Pro	Glu	Asn	Phe	Leu	Phe	Asp	Ser
145					150					155					160
Pro	Lys	Asp	Asp	Ala	Lys	Leu	Lys	Ala	Thr	Asp	Phe	Gly	Leu	Ser	Val
				165					170					175	
Phe	Tyr	Lys	Pro	Gly	Gln	Tyr	Leu	Tyr	Asp	Val	Val	Gly	Ser	Pro	Tyr
			180					185					190		
Tyr	Val	Ala	Pro	Glu	Val	Leu	Lys	Cys	Tyr	Gly	Pro	Glu	Ile	Asp	
		195					200					205			
Val	Trp	Ser	Ala	Gly	Val	Ile	Leu	Tyr	Ile	Leu	Leu	Ser	Gly	Val	Pro
	210					215						220			
Pro	Phe	Trp	Ala	Glu	Thr	Glu	Ser	Gly	Ile	Phe	Arg	Gln	Ile	Leu	Gln
225					230					235					240

Gly Lys Leu Asp Phe Lys Ser Asp Pro Trp Pro Thr Ile Ser Glu Ala  
 245 250 255  
 Ala Lys Asp Leu Ile Tyr Lys Met Leu Glu Arg Ser Pro Lys Lys Arg  
 260 265 270  
 Ile Ser Ala His Glu Ala Leu Cys His Pro Trp Ile Val Asp Glu Gln  
 275 280 285  
 Ala Ala Pro Asp Lys Pro Leu Asp Pro Ala Val Leu Ser Arg Leu Lys  
 290 295 300  
 Gln Phe Ser Gln Met Asn Lys Ile Lys Lys Met Ala Leu Arg Val Ile  
 305 310 315 320  
 Ala Glu Arg Leu Ser Glu Glu Glu Ile Gly Gly Leu Lys Glu Leu Phe  
 325 330 335  
 Lys Met Ile Asp Thr Asp Asn Ser Gly Thr Ile Thr Phe Glu Glu Leu  
 340 345 350  
 Lys Ala Gly Leu Lys Arg Val Gly Ser Glu Leu Met Glu Ser Glu Ile  
 355 360 365  
 Lys Ser Leu Met Asp Ala Ala Asp Ile Asp Asn Ser Gly Thr Ile Asp  
 370 375 380  
 Tyr Gly Glu Phe Leu Ala Ala Thr Leu His Met Asn Lys Met Glu Arg  
 385 390 395 400  
 Glu Glu Ile Leu Val Ala Ala Phe Ser Asp Phe Asp Lys Asp Gly Ser  
 405 410 415  
 Gly Tyr Ile Thr Ile Asp Glu Leu Gln Ser Ala Cys Thr Glu Phe Gly  
 420 425 430  
 Leu Cys Asp Thr Pro Leu Asp Asp Met Ile Lys Glu Ile Asp Leu Asp  
 435 440 445  
 Asn Asp Gly Lys Ile Asp Phe Ser Glu Phe Thr Ala Met Met Arg Lys  
 450 455 460  
 Gly Asp Gly Val Gly Arg Ser Arg Thr Met Met Lys Asn Leu Asn Phe  
 465 470 475 480  
 Asn Ile Ala Asp Ala Phe Gly Val Asp Gly Glu Lys Ser Asp Asp  
 485 490 495

<210> 2

<211> 1747

<212> DNA

<213> Arabidopsis thaliana

<400> 2

gatccgggta catattcttc ttcttcttca aatcgagatc gaagaagaac caacaaaaaa 60  
 ccaaaaaatgg agacgaagcc aaaccctaga cgtccttcaa acacagttct accatatcaa 120  
 acaccacgat taagagatca ttaccttctg ggaaaaaagc taggccaagg ccaatttgga 180  
 acaacctatc tctgcacaga gaaatcaacc tccgctaatt acgcctgcaa atcgatcccc 240  
 aagcgaaagc tcgtgtgtcg cgaggattac gaagatgtat ggcgtgagat tcagatcatg 300  
 catcatctct ctgagcatcc aaatgttggtt aggatcaaag ggacttatga agattcgggtg 360  
 tttgttcata ttgttatgga ggtttgtgaa ggtggtgagc tttttgatcg gattgtttct 420  
 aaaggtcatt ttagtgagcg tgaagctgtc aagcttatta agacgattct tgggtgttggt 480  
 gaggcttgct attctcttgg tgttatgcat agagatctca aacctgagaa tttcttggtt 540  
 gatagtccta aagatgatgc taagcttaag gctaccgatt ttgggttgct tgtcttctat 600  
 aagccaggac aatatttata tgacgtagtt ggaagtcogt actatgttgc accagaggtg 660  
 ctaaagaaat gttatggacc tgaaatagat gtgtggagtg ctggtgttat cctctacatt 720  
 ttactcagcg gtgttcctcc cttctgggca gagactgagt ctggaatctt tagacagata 780  
 ttgcaaggga agtttagattt caaatctgac ccgtggccta ctatctcaga agctgctaaa 840

```

gatttgatct ataaaatgct cgaaaggagc cccaagaaac gcattttctgc tcatgaagcc 900
ttgtgtcacc catggattgt cgatgaacaa gcagcaccag acaagcctct tgatccagca 960
gtcttatctc gtctaaagca gttttctcaa atgaataaga ttaagaaaat ggcattacgg 1020
gtaattgctg agagactttc agaggaagaa attggaggtc tgaaggaatt gttcaagatg 1080
atagacacag acaacagcgg aacgattact tttgaagagc tcaaagcggg tttgaagaga 1140
gtcggatctg aactgatgga atcagaaatc aagtctctca tggatgcggc tgatatcgac 1200
aacagtggta caatagacta cggagaattc ctagcagcaa ccttacacat gaacaagatg 1260
gagagagagg agattctggg ggctgcattt tcggactttg acaaagacgg aagcggttat 1320
atcaccatcg atgagcttca gtcagcttgc acagagtttg gtctatgtga tacacctctg 1380
gacgacatga tcaaggagat tgatcttgac aatgacggga agatcgattt ctcggagttt 1440
acagcaatga tgaggaaagg agatggagtt gggagaagca gaaccatgat gaagaacttg 1500
aacttcaaca ttgctgatgc ttttggagtt gatggtgaaa aatctgatga ctgactcatc 1560
attcttccac aatttctggt tttttctct ttaatttcgt ttatatattg aattctaatt 1620
tctaaggata caaaaatata ttctggcttg ttttttgctt tcctttttat ttttgtacat 1680
gagcaacttt ctaaattttt atcctcatat ggataatttt tgcttcatat aaaagttttt 1740
gaattcc 1747

```

<210> 3

<211> 501

<212> PRT

<213> Arabidopsis thaliana

<400> 3

```

Met Glu Lys Pro Asn Pro Arg Arg Pro Ser Asn Ser Val Leu Pro Tyr
 1          5          10          15
Glu Thr Pro Arg Leu Arg Asp His Tyr Leu Leu Gly Lys Lys Leu Gly
 20          25          30
Gln Gly Gln Phe Gly Thr Thr Tyr Leu Cys Thr Glu Lys Ser Ser Ser
 35          40          45
Ala Asn Tyr Ala Cys Lys Ser Ile Pro Lys Arg Lys Leu Val Cys Arg
 50          55          60
Glu Asp Tyr Glu Asp Val Trp Arg Glu Ile Gln Ile Met His His Leu
 65          70          75          80
Ser Glu His Pro Asn Val Val Arg Ile Lys Gly Thr Tyr Glu Asp Ser
 85          90          95
Val Phe Val His Ile Val Met Glu Val Cys Glu Gly Gly Glu Leu Phe
100          105          110
Asp Arg Ile Val Ser Lys Gly Cys Phe Ser Glu Arg Glu Ala Ala Lys
115          120          125
Leu Ile Lys Thr Ile Leu Gly Val Val Glu Ala Cys His Ser Leu Gly
130          135          140
Val Met His Arg Asp Leu Lys Pro Glu Asn Phe Leu Phe Asp Ser Pro
145          150          155          160
Ser Asp Asp Ala Lys Leu Lys Ala Thr Asp Phe Gly Leu Ser Val Phe
165          170          175
Tyr Lys Pro Gly Gln Tyr Leu Tyr Asp Val Val Gly Ser Pro Tyr Tyr
180          185          190
Val Ala Pro Glu Val Leu Lys Lys Cys Tyr Gly Pro Glu Ile Asp Val
195          200          205
Trp Ser Ala Gly Val Ile Leu Tyr Ile Leu Leu Ser Gly Val Pro Pro
210          215          220
Phe Trp Ala Glu Thr Glu Ser Gly Ile Phe Arg Gln Ile Leu Gln Gly
225          230          235          240
Lys Ile Asp Phe Lys Ser Asp Pro Trp Pro Thr Ile Ser Glu Gly Ala

```



tacaaaatgc	tcgataggag	ccccaagaaa	cgtatctctg	cacatgaagc	attgtgtcac	840
ccttggattg	ttgatgaaca	tgctgcacca	gacaagcctc	tcgacccagc	agtcttgtcg	900
cgacttaagc	agttctcgca	aatgaataaa	atcaagaaaa	tggccttacg	agtaatcgcg	960
gagagactct	cggaggaaga	gattggtggt	ctgaaggaat	tggtcaaaaat	gatagataca	1020
gacaacagtg	gaacaatcac	ctttgaagag	cttaaagcag	gtctaaagag	agttggatct	1080
gaattgatgg	aatcagaaat	caagtctctt	atggatgcgg	cggatataga	caacagtggg	1140
acaatagact	acggtgaatt	cctagcagcg	acattacata	taaacaagat	ggagagagaa	1200
gagaacttgg	tggttgcggt	ttcatacttt	gataaagatg	gtagcggtta	tatcaccatt	1260
gacgagcttc	aacaagcctg	cacagagttt	ggtctctgtg	acactcctct	tgatgacatg	1320
atcaaagaga	ttgatcttga	taatgacggg	aagattgatt	tctcagagtt	tactgctatg	1380
atgaagaaaag	gagatggtgt	tgggaggagc	agaactatga	ggaacaactt	gaacttcaat	1440
atagctgaag	cttttgaggt	tgaggacaca	agcagcactg	ctaaatctga	tgattcacca	1500
aagtaattat	aatcatctat	atacttgga	ttgagaaatg	agaactcaca	aaagaaaaac	1560
tgaatctttc	ctttttgttt	tcgtttccac	ttttgtagat	gagcaacttt	ctcaattttg	1620
ttataagcat	ggataatttt	gcttcatatt	ttctgcg			1657

1657-1658